STATEMENT OF BASIS

Calhoun Power Company I, LLC
Calhoun Energy Center
Eastaboga, Alabama
Calhoun County
301-0073

This proposed renewal to the Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above-referenced applicant has applied to renew the existing Title V Permit, which was originally issued on April 6, 2006. The applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents, which were submitted on November 6, 2015 and are attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Calhoun Power Company (CPC), LLC was issued its existing Major Source Operating Permit (MSOP) on May 9, 2011, with an expiration date of May 8, 2016. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, the application for renewal was due to the Department no later than November 8, 2015. No additional information was deemed necessary for processing of this MSOP.

The Calhoun Energy Center is owned and operated by Calhoun Power Company I, LLC. and is located in Eastaboga, Alabama. The Calhoun Power Company is a power production facility that consists of four simple cycle combustion turbines, each generating approximately 170 megawatts (MW) of electric power for distribution.

The facility has not proposed the addition of any new emission sources or modifications to this permit during this renewal period. However, the applicable requirements of Cross-State Air Pollution Rule (CSAPR) will be included in this renewal.

The significant sources of air pollutants at this facility are the following:

- Four (4) 170 MW Simple Cycle Combustion Turbine Units
- 61 hp Diesel-fired Emergency Portable Air Compressor

CPC has requested a permit shield in their Title V application, the specific regulations that CPC has requested a shield from can be found in *Appendix E* of their application.

Four (4) 170 MW Simple Cycle Combustion Turbine Units

The simple cycle combustion turbine units may fire natural gas or fuel oil. These units

utilize dry low NO_x burners while burning natural gas and direct water spray fogging systems while burning fuel oil to control NO_x emissions.

The simple cycle combustion turbine units were subject to a Prevention of Significant Deterioration (PSD) Review in which BACT was established for NO_x, CO, SO_2, and PM_{10} and sulfuric acid mist. The combustion turbines are also subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart GG. The simple cycle combustion turbine units are also subject to the Acid Rain Program and CSAPR. Each simple cycle combustion turbine unit's expected emissions and the associated standards are listed below.

Emission Standards

Opacity:

- Visible Emissions from each simple cycle combustion turbine stack shall not exceed 10%.

  (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

Particulate Matter (PM):

- Particulate emissions from each simple cycle combustion turbine stack shall not exceed 0.009 lb/MMBtu and 9.0 lb/hr while firing natural gas.

  (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Particulate emissions from each simple cycle combustion turbine stack shall not exceed 0.015 lb/MMBtu and 17.0 lb/hr while firing Distillate oil.

  (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- The above emissions limits are BACT limits resulting from a PSD review.

  (ADEM Admin. Code r. 335-3-14-04)

The PM emission standards apply at all times except during startup, shutdown, and load change.

Sulfur Dioxide (SO_2):

- Sulfur Dioxide emissions from each simple cycle combustion turbine stack shall not exceed 0.006 lb/MMBtu and 10.7 lb/hr while firing natural gas.

  (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- Sulfur Dioxide emissions from each simple cycle combustion turbine

stack shall not exceed 0.06 lb/MMBtu and 105.9 lb/hr while firing distillate oil.

(ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- The sulfur content of the fuel oil fired in the turbines is limited to ≤0.05% by weight.
  (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT

- The sulfur content of the fuel oil fired in the turbines is limited to ≤150 ppmv or ≤0.8% by weight.

  (40 CFR Part 60, Subpart GG)

- The simple cycle combustion turbine units are subject to the Acid Rain Regulations. This unit is not allocated SO_2 allowances under Phase II of the Acid Rain Program. This unit shall hold sufficient allowances in the unit account to cover annual SO_2 emissions.

  (ADEM Admin. Code r. 335-3-18-.01 and 40 CFR Part 73)

The SO_2 emission standards apply at all times except during startup, shutdown, and load change.

Nitrogen Oxides (NO_x):

- Nitrogen Oxides emissions from each simple cycle combustion turbine stack shall not exceed the following:

Operating Condition	NO_x (lb/MMBtu)	NO_x (lb/hr)
50%-100% load (12-month annual average)	0.033	64.1
50%-100% load (rolling 3-hour average)	0.044	85.5
Peak load	0.055	110.6
Distillate oil firing	0.163	342.5

- The above emissions limits are BACT limits resulting from a PSD review.

  (ADEM Admin. Code r. 335-3-14-.04)

- Nitrogen Oxides emissions from each simple cycle combustion turbine are limited to ≤75 ppmv corrected to 15% O_2 on a dry basis adjusted for heat rate and fuel bound nitrogen (rolling 4-hour averages).

  (40 CFR Part 60, Subpart GG)

The NO_x emission standards apply at all times except during startup, shutdown, and load change.

Carbon Monoxide (CO):

- Carbon Monoxide emissions from each simple cycle combustion turbine stack shall not exceed the following:

Operating Condition	CO (lb/MMBtu)	CO (lb/hr)
50%-100% load	0.017	31.8
Peak load	0.026	53.5
Distillate oil firing	0.064	78.6

- The above emissions limits are BACT limits resulting from a PSD review.

  (ADEM Admin. Code r. 335-3-14-.04)

The CO emission standards apply at all times except during startup, shutdown, and load change.

Sulfuric Acid Mist:

- Sulfuric Acid Mist emissions from each simple cycle combustion turbine shall be limited to ≤0.0004 lb/MMBtu and 0.82 lb/hr when firing natural gas.

  (ADEM Admin. Code r. 335-3-14-04) BACT

- Sulfuric Acid Mist emissions from each simple cycle combustion turbine shall be limited to ≤0.0039 lb/MMBtu and 8.1 lb/hr when firing distillate oil.

  (ADEM Admin. Code r. 335-3-14-04) BACT

- The above emissions limits are BACT limits resulting from a PSD review.

  (ADEM Admin. Code r. 335-3-14-04)

Volatile Organic Compounds (VOC):

- There are no applicable standards for VOCs.

Expected Emissions

Particulate Matter (PM) and Opacity:

- During initial compliance testing, the PM emission rate from CT1, while operating at full load, was less than half of permitted allowable emission limits. The Department therefore did not require particulate matter testing for CT2, CT3, or CT4. The results of the initial compliance testing for CT1, as determined by the Department, are as follows:

Unit	PM (lb/MMBtu) NG	PM (lb/MMBtu) Oil	PM (lb/hr) NG	PM (lb/hr) Oil
CT1	0.0017	0.0020	3.38	4.18

During the initial performance testing, no visible emissions were observed while firing fuel oil.

Sulfur Dioxide (SO_2):

- During initial compliance testing, the SO_2 emission rates from the units were well below the permitted limits. The following are the worst case emission rates, as calculated by the Department, during the initial performance testing:

Unit	SO_2 (lb/MMBtu) NG	SO_2 (lb/MMBtu) Oil	SO_2 (lb/hr) NG	SO_2 (lb/hr) Oil
CT1	0.0002	0.0038	0.326	7.34
CT2	0.0001	0.0010	0.186	1.86
CT3	0.0001	0.0038	0.155	6.87
CT4	0.0001	0.0374	0.179	66.7

Nitrogen Oxides (NO_x):

- During initial compliance testing, the NO_x emission rates from the units were below the permitted allowable limits. Based on the results of the NOx emissions test for CT4 at peak load, no peak load testing was required for CT1, CT2, and CT3. The following are the worst case emission rates from the initial performance testing as calculated by the Department:

Unit	NO_x (lb/MMBtu) NG 50%-100%	NO_x (lb/MMBtu) NG Peak load	NO_x (lb/MMBtu) Oil 50%-100%	NO_x (lb/hr) NG 50%-100%	NO_x (lb/hr) NG Peak load	NO_x (lb/hr) Oil 50%-100%
CT1	0.033	NR	0.153	54.5	NR	279.5
CT2	0.029	NR	0.158	53.4	NR	277.4
CT3	0.026	NR	0.138	43.8	NR	251.6
CT4	0.029	0.028	0.138	60.8	60.1	238.5

**NR – not required

Carbon Monoxide (CO):

- During initial compliance testing, the CO emission rates from the units were below the permitted allowable limits. Based on the results of the CO emissions test for CT4 at peak load, no peak load testing was required for CT1, CT2, and CT3. The following are the worst case emission rates indicated during the initial performance testing as calculated by the Department:

Unit	CO (lb/MMBtu) NG 50%-100%	CO (lb/MMBtu) NG Peak load	CO (lb/MMBtu) Oil 50%-100%	CO (lb/hr) NG 50%-100%	CO (lb/hr) NG Peak load	CO (lb/hr) Oil 50%-100%
CT1	0.001	NR	0.0019	1.81	NR	2.40
CT2	0.002	NR	0.001	3.68	NR	2.12
CT3	0.001	NR	0.001	1.73	NR	1.93
CT4	0.0003	0.0004	0.0013	0.52	0.81	1.61

**NR – not required

Volatile Organic Compounds (VOC):

- The Air Permits do not contain any VOC emission limits. Following are the worst case emission rates as calculated by the Department during initial testing:

Unit	VOC (lb/hr)* NG	VOC (lb/hr)* Oil
CT1	0.475	0.309
CT2	0.399	0.726
CT3	0.354	0.373
CT4	1.58	1.85

**As propane*

Green House Gases (GHG):

- The facility reported a total of 23,210 Tons. This is an estimate of the actual emissions for the calendar year of 2014.

Periodic Monitoring and Compliance Assurance Monitoring (CAM)

Particulate Matter (PM) and Opacity:

- Based on the low expected levels of emissions as compared to the regulatory allowable emission limits, periodic monitoring of opacity and particulate matter emissions is not considered necessary. Additionally the only control device for the CT is an SCR that is only used to control NOx emissions; therefore, CAM is not applicable to PM and Opacity.

Sulfur Dioxide (SO_2):

- Monitoring the sulfur content of the fuel oil burned in the combustion turbines should provide reasonable assurance that the units are complying with the SO_2 and sulfuric acid emission limits. Additionally the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to SO_2.
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Nitrogen Oxides (NO_x):

- These units are required by 40 CFR Part 75 to maintain and operate NO_x Continuous Emissions Monitoring Systems (CEMS). Based on 40 CFR §64.2, the only pollutant subject to CAM would be NO_x since it is the only pollutant which is controlled by an active control device (water injection while burning fuel oil) and the potential uncontrolled emission rate being greater than 100 tons per year. 40 CFR §64.2(b)(vi) provides exemptions for the CAM regulations including using CEMS as a continuous compliance determination method (CCDM). Calhoun Energy Center has requested in the Title V application that NO_x CEMS also be used as a CCDM. 40 CFR §64.2(b)(vi) states that the requirements of CAM shall not apply to any of the emission limitations or standards for which a part 70 or 71 permit specifies a CCDM. On May 31, 2005, EPA Region IV approved Calhoun's request to utilize the CEMS as a CCDM, therefore exempting the units from CAM. The CEMS would therefore be a compliance determiner for each of the applicable NOx limits based upon the associated averaging times.

Carbon Monoxide (CO):

- Initial performance testing for CO was conducted at varying loads while firing fuel oil and while firing natural gas. The performance testing results indicated that the CO emissions were well below the permitted limits; therefore, no periodic monitoring for CO is necessary. Additionally the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to CO.

Volatile Organic Compounds (VOC):

- Periodic monitoring would not apply for VOCs, since there are no VOC emission limits listed in the existing permits. Additionally the only control device for the CT is an SCR that is only used to control NO_x emissions; therefore, CAM is not applicable to VOC.

Recordkeeping and Reporting

- An emission report as defined by 40 CFR 60.7(c) will be submitted to the ADEM within 30 days of the end of the calendar quarter

  (ADEM Admin. Code r. 335-3-16-.05(c) and 40 CFR 64.9)

- Records of the following shall be maintained in a file suitable for inspection for a period of at least five years following said recording:

  (a) The percent by weight of the sulfur in the fuel oil burned in the combustion turbines.
  (b) Monthly and rolling 12-month total operating hours for each turbine.
  (c) Monthly and rolling 12-month total operating hours for each turbine while firing distillate oil.
  (d) Monthly and rolling 12-month total operating hours for each turbine during peak mode conditions.
  (e) The loads at which the turbines operated.

  (ADEM Admin. Code r. 335-3-16-.05(c))

Cross-State Air Pollution Rule

- This unit is subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the SO_2 Group 2 Trading Program requirements.

  (ADEM Admin. Code r. 335-3-5-.07 through 335-3-5-.36)

- This unit is subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the NOx Annual Trading Program requirements.

  (ADEM Admin. Code r. 335-3-8-.07 through 335-3-8-.65)

61 hp Diesel-fired Emergency Portable Air Compressor

Calhoun Energy Center was issued an air permit (X003) on October 8, 2009, for the operation of a 61 hp diesel-fired emergency portable air compressor. The unit is a Sullair Model 185 permitted for emergency use only. The unit is subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart IIII. This unit is also subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines contained in 40 CFR Part 63, Subpart ZZZZ. The expected emissions and the associated standards for the emergency portable air compressor are listed below.

Emission Standards

Operational:

- This unit must be certified for emission standards according to 40 CFR Part 89.112 and 40 CFR 89.113 for new non-road compression ignition engines for the same model year and maximum engine power for all pollutants.

(40 CFR Part 60 Subpart IIII)

- This unit must be installed and configured according to the manufacturer's specifications.

  (40 CFR Part 60 Subpart IIII)

- The owner or operator of this unit must install a non-resettable hour meter prior to startup of the engine.

  (40 CFR Part 60 Subpart IIII)

- This unit shall use diesel fuel that meets the requirements of 40 CFR 80.510(b).

  (40 CFR Part 60 Subpart IIII)

- This unit shall be operated and maintained according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

  (40 CFR Part 60 Subpart IIII)

- This unit shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII.

  (40 CFR Part 63 Subpart ZZZZ)

Expected Emissions

Particulate Matter (PM):

- Based on Manufacturers specifications, the PM emission rate is 0.040 lb/hr.

Sulfur Dioxide (SO_2):

- Based on Manufacturers specifications, the SO_2 emission rate is 0.078 lb/hr.

Nitrogen Oxides (NO_x):

- Based on Manufacturers specifications, the NO_x emission rate is 0.922 lb/hr.

Carbon Monoxide (CO):

Based on Manufacturers specifications, the CO emission rate is 0.50 lb/hr.

Periodic Monitoring

Particulate Matter (PM):

- Based on the low expected levels of emissions and limited operation, periodic monitoring of particulate matter emissions is not considered necessary.

Sulfur Dioxide (SO_2):

- Based on the diesel fuel requirements and limited operation, no periodic monitoring of SO_2 emissions is considered necessary.

Nitrogen Oxides (NO_x):

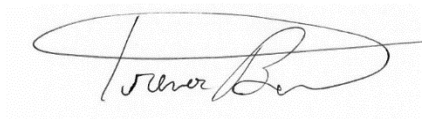
- Based on the low expected levels of emissions due to limited operation, periodic monitoring of nitrogen oxide emissions is not considered necessary.

Carbon Monoxide (CO):

- Based on the low expected levels of emissions and limited operation, periodic monitoring of carbon monoxide emissions is not considered necessary.

Compliance Assurance Monitoring (CAM)

There are no active control devices associated with this unit; therefore, CAM is not applicable.



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